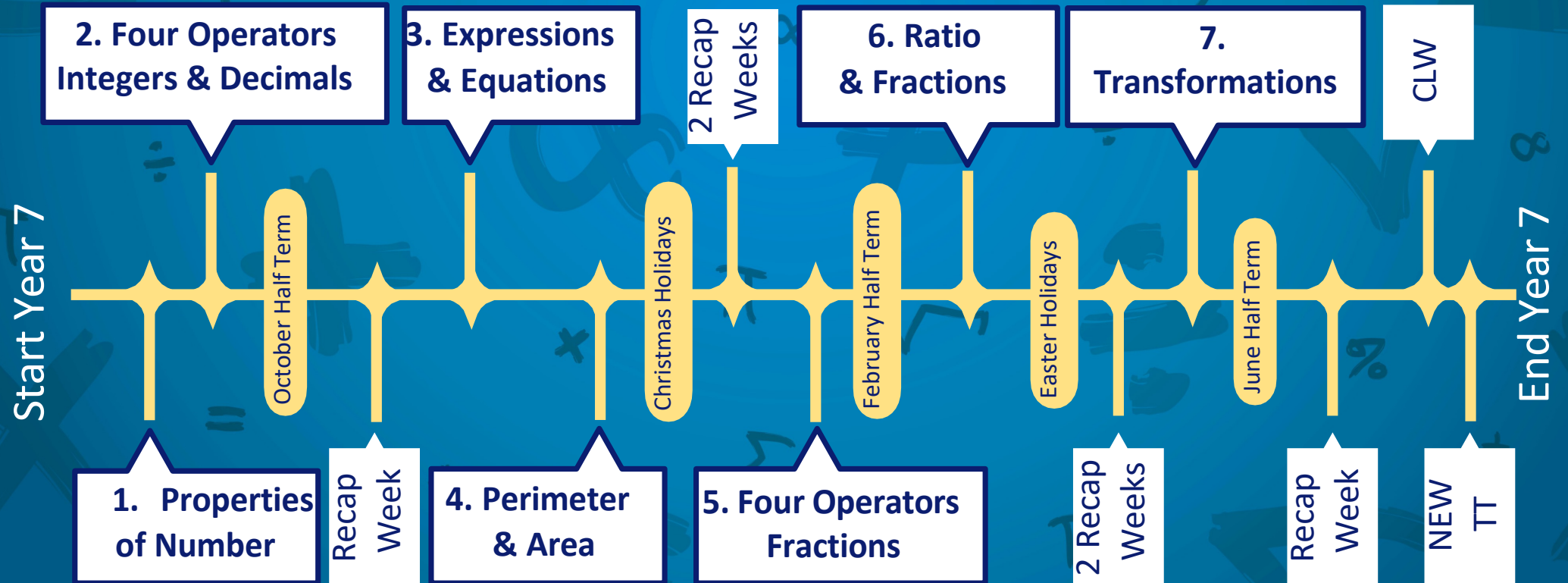


YEAR 7

SCHEME OF LEARNING



	Topics / National Curriculum Links	Why?
1 – Properties of Number	Place Value, $\times 10/100/1000$, $\div 10/100/1000$, $\times 0.1/0.01$, $\div 0.1/0.01$, Factors and Multiples, BIDMAS, Types of number and HCF/LCM.	Number skills and understanding underpin most of our mathematical reasoning and problem solving. A strong fundamental understanding and confidence working with numbers, both with or without calculators is paramount as we move on our learning journey.
2 – Four Operators with Integers and Decimals	$+/-/ \times$ and \div with integers, $+/-/ \times$ and \div with decimals, Powers and Roots, BIDMAS and use of calculators.	Moving on from our initial learning or compounded learning we branch into more number work and problem solving. This number work will be tailored to learner ability, we hope to develop fluency and confidence.
3 – Expressions and Equations	Language of Algebra, algebraic terminology, substitution, collecting like terms, expanding and factorising.	Moving onto our first exposure to algebra, the language and actual meaning of why we use algebra is emphasised. Whilst all learners acquire basic skills, more advanced learners may also start to form and solve algebra at this stage.
4 – Perimeter and Area	Perimeter of polygons and compound shapes, area of polygons and compound shapes. Unit conversions length and area, area and circumferences of circles.	We move into applications of our number skills based around shape and unit conversions. Shape and shape characteristics are key to students learning and understandings, again teaching group requirements are taken into consideration.
5 – Four operators with Fractions	Fractions, decimals and percentages, simplifying fractions, fractions of amounts, improper and mixed number conversions, 4 operators with fractions and mixed numbers.	More number skills follow on with conversion and size ordering of fractions, decimals and percentages. Improper fraction conversion to and from mixed number, followed by ability to do fractional calculations around 4 operators.
6 – Ratio and Fractions	Ratio and fraction problems, cancelling ratios, equivalent ratios, dividing given ratios, ratio 1:n, combining ratios	Ratio is our next stage of the learning journey, blending nicely from our fraction work. All students are expected to perform fundamental ratio calculations, but all work is pitched to group and learner requirements.
7 - Transformations	Plotting and writing coordinates, vector translations, reflections, rotations and enlargements	Mathematical shape transformations complete year 7 studies. All students will be expected to be proficient with all 4 transformations, again this can be extended for learners if required.